Journal of Physics: Conference Series 2011 vol.324 N1

The NMR line shape of magneto-active nanoclusters in moveable nano-containers with self-similar stochastic dynamics

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Abstract

NMR line shape of isolated spin clusters in moving nanocontainers with self-similar correlation law was calculated. It was shown that taking into account self-similarity in stochastic dynamics of pores leads to new shapes of NMR lines which differ from traditional shapes of Gauss and Lorentz types. Fractal dimension of spatial-temporal ensemble can serve as convenient fitting parameter for experimental data interpretation.

http://dx.doi.org/10.1088/1742-6596/324/1/012005